

# INDOT Traffic Data, Statistics and Web Portal

## Road School Session #15



# Intro

- Count Program Overview
- Current INDOT Count Technologies Used
- Deliverables
- Traffic Counting Issues
- Proposed INDOT Changes & Technologies
- Demo of new Flow Map and Interstate Volumes





# INDOT's Role

- Develop & oversee Indiana's count program for all Federal-Aid Routes, nearly 23,000 center line miles. Administer funds to MPO and RPO counting partners
  - Post RFPs & Manage Consultant Counting Contracts
  - Annual workflow assignments
  - QC/QA all incoming data
  - Certify and train traffic counters
  - Perform spot audits
  - Research new counting technologies and procedures
  - Facilitate coordination meetings
- Reach out to locals in performing counts on local corridors.





# Current Program Counts Types

## 1. **Continuous Counts**

- Permanently installed count stations
- Used to develop statewide factors to adjust all counts
- Used in the Long Term Pavement Program (LTPP)
- Currently working with ITS as a source

## 2. **Short-Counts**

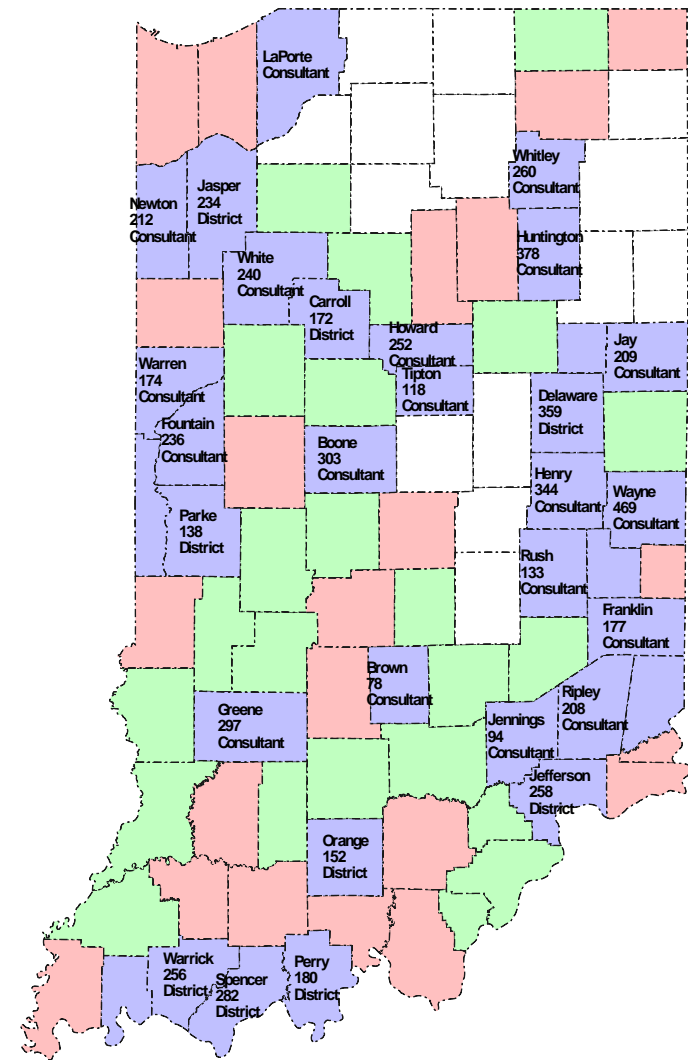
- Portable count technology, usually tube count technology
- Standard of 48 hours in duration
- Collect roughly 12,200 counts annually
- Coordinate with count partners (MPOs, RPOs, Districts, and consultants)
- Perform Special Counts for Asset and Project Management for Corridor Studies



# INDOT Traffic Counting Program

## 1/3 Counts Annually

- Approximately 12,200 Counts Annually
- Perform Monthly VMT Submittals
- Annual HPMS Submittal



# Count Program Standards

- **Traffic Monitoring Guide**

- FHWA Guidebook – provides general guidance
- DOTs have the flexibility of creating their own program

- **AASHTO Parameters**

- Focuses on collection of traffic count volumes, vehicle classification, and WIM
- Parameters are used to develop statistics and QC/QA data

- **INDOT Traffic Data Collection Manual** – for field technicians.  
MPOs and RPO may have their own unique manuals and guides

- **INDOT Safety Manual** – supplements INDOT's Safety and Traffic Control procedures as it relate to traffic data collection

- **INDOT Data Submission Procedure Manual**

- Helps develop standards for our count partners (recounts, stationing, and other items)

- **Periodic Audits by FHWA**





# Technologies Currently Used

- Standard Road Tube Counters (work with MPOs, RPOs, and consultants that use various vendors)
- Tape Switch Counters
- Weigh in Motion (WIM) and Virtual WIM
- Automatic Traffic Recorders
- Laser Counters (Axle Light Application)
- TRADAS Software



# AxleLight Application



Courtesy of Peek U. S. Traffic Corporation





# Training & Certifications

- Equipment & Staff Certification
- Safety Discussion & Training
  - Safety Equipment (recommended/required)
  - Safety Procedures
- New equipment and procedures
- Written and practical exams
- INDOT's Traffic Count Program is audited by FHWA



# Scheduled Training

- March 12 – 14 (Southern Region – Seymour District)
- March 19 – 21 (Central Region – Indy Sub, Brookville Road)
- March 26 – 28 (Northern Region – Elkhart Sub)



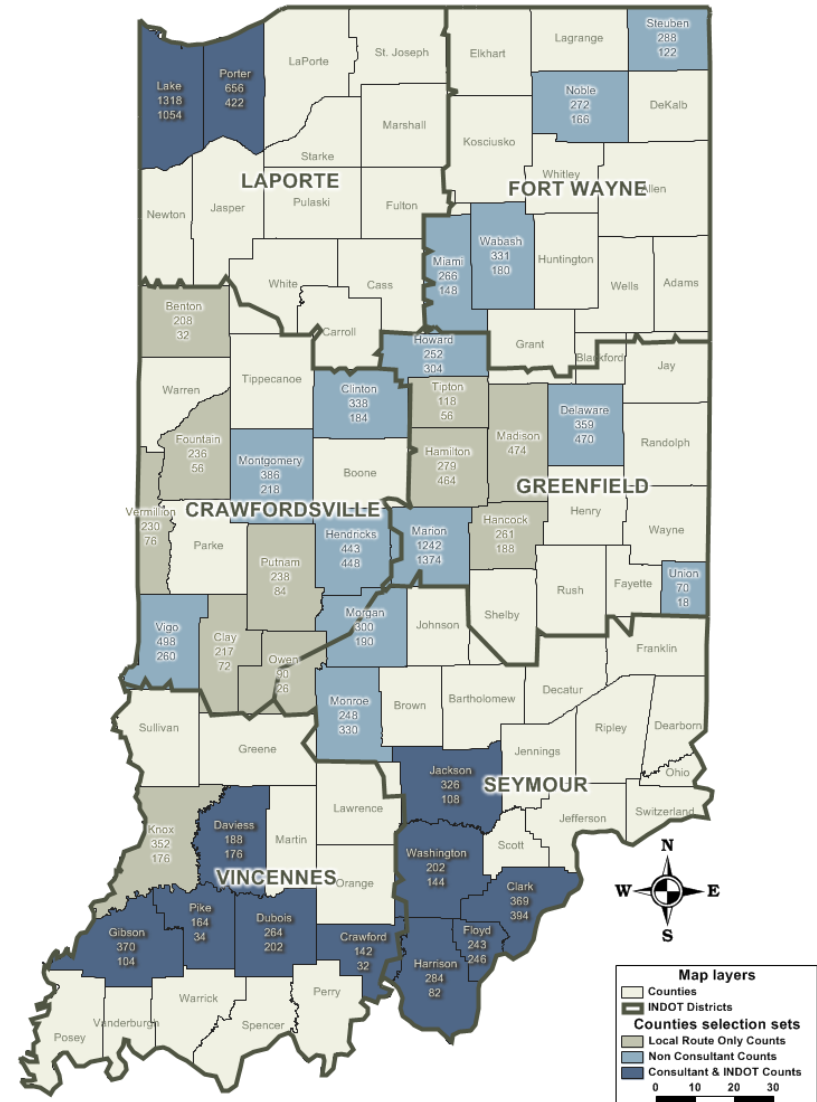
# Traffic Count Deliverables

- Annual Highway Performance Monitoring Systems (HPMS) VMT by: road section, FC, and road ownership. Coordination with Road Inventory Team
  - Used for agency performance measures
  - Safety analysis
  - Federal funding apportionment
- Monthly VMT reports submitted to FHWA and Executive Office
- Interstate data for Lane Closure Policy Waivers...New MIP application
- WIM for Long Term Pavement Program (LTPP) and related analysis
- VWIM data for enforcement
- Annual and seasonal adjustment factors (K & D factors)
- Special counts to support PM, Corridor Studies, and operational improvements
- Interactive Traffic Data Map
- Traffic Count Database Information (supports various planning and system assessment models and operational needs)



# 2012 Count Program

- 2012 Count Program
  - Subject to change



# Traffic Count Program Challenges

- *No federal standards, just recommended guidelines (TMG, AASHTO)*
- *Need additional permanent location on lower functional classification roadways for improve statistical analysis. Current devices are on interstates and freeways. Agency has little interest in investing on lower classifications due to cost.*
- *New technology uses vehicle length bins*
- *Staff resources*
- *Safety concerns*
- *Inefficient database system*
- *Coordination with ITS equipment and Research Technology*
- *Geography*





# New Technologies for 2012 & Beyond

- Midwestern Solutions Traffic Count Database Software
- WaveTronix – work with ITS in connecting to select devices to supplement ATR needs. Use portable WaveTronix devices on difficult locations
- Nu Metrics – Quicker deployment in busy areas and intersections
- Modernized Traffic Signals – Coordination with ITS in being able to collect data traffic signal data
- Video count devices - Already being used and leased for activities. Would like to purchase devices
- Bike & Pedestrian Counts
- Sensys devices – to replace some ATR type technology

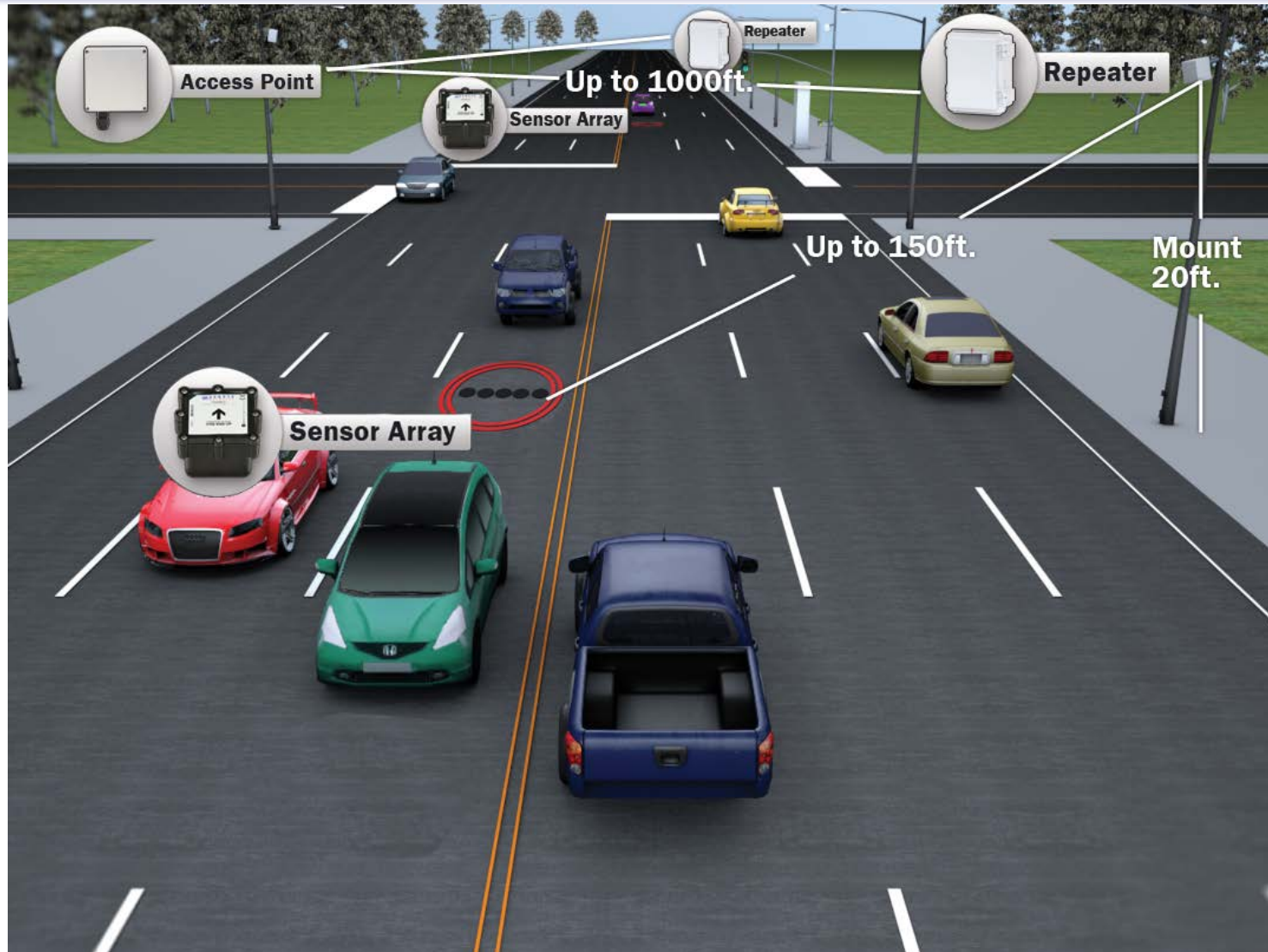


# Counting Technologies for INDOT Consideration





# Counting Technologies for INDOT Consideration



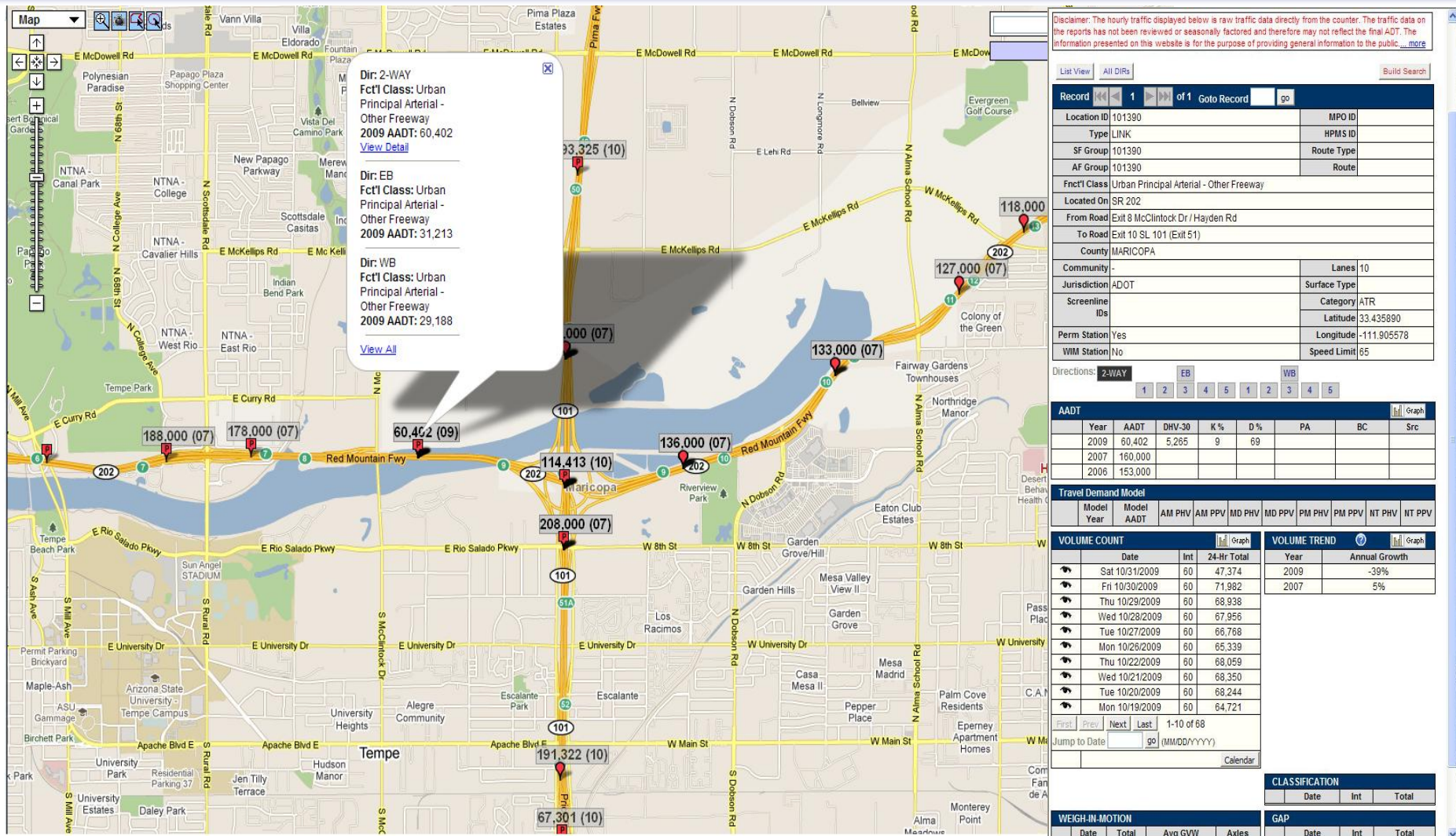


# Midwestern Software Solutions Traffic Count Software



- Off the shelf software package for traffic count data management
- Online Portal for data uploads by our various count partners
- Data can be uploaded from various count device equipment: (WIM, VWIM, ATRs, Side-Firing Radar, Laser, Video, Pneumatic Counters, Magnetic Counters, modern traffic signals, and others)



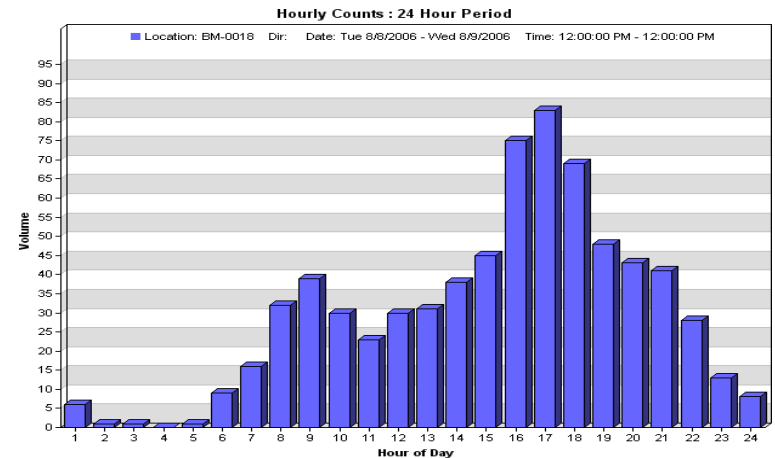
# Midwestern Software Traffic Count Software



# Midwestern Software Traffic Count Software

VOLUME COUNT DATA INFO			
START DATE:	5/10/1999	3/30/2006	
END DATE:	5/11/1999	3/31/2006	
START TIME:	11:00:00 AM	11:00:00 AM	
END TIME:	11:00:00 AM	11:00:00 AM	
DIRECTION:			
STATION:	LAKEVILLE	FO348	
FILENAME:			
NOTES:	F0258		
CONDITION:			
WEATHER:			
BAR:			

INTERVAL: 60-MIN			
TIME	HOURLY COUNT	TIME	HOURLY COUNT
0:00-1:00	24	0:00-1:00	20
1:00-2:00	15	1:00-2:00	10
2:00-3:00	10	2:00-3:00	5
3:00-4:00	10	3:00-4:00	4
4:00-5:00	14	4:00-5:00	4
5:00-6:00	33	5:00-6:00	32
6:00-7:00	109	6:00-7:00	158
7:00-8:00	315	7:00-8:00	445
8:00-9:00	263	8:00-9:00	445
9:00-10:00	204	9:00-10:00	325
10:00-11:00	292	10:00-11:00	204
11:00-12:00	123	11:00-12:00	297
12:00-13:00	210	12:00-13:00	270
13:00-14:00	249	13:00-14:00	263
14:00-15:00	178	14:00-15:00	321
15:00-16:00	271	15:00-16:00	456
16:00-17:00	316	16:00-17:00	504
17:00-18:00	297	17:00-18:00	543
18:00-19:00	305	18:00-19:00	422
19:00-20:00	243	19:00-20:00	261
20:00-21:00	130	20:00-21:00	213
21:00-22:00	146	21:00-22:00	180
22:00-23:00	108	22:00-23:00	86
23:00-24:00	54	23:00-24:00	42
TOTAL	3,919	TOTAL	5,510



## TCDS Administration

General **TCDS** TSMS TCLS TTDS PMS PMDS RSMS PCDS PMMS WOTS RTTV

Import Count Data				
PRH <a href="#">Single File</a> <a href="#">Multiple Files</a>	JAMAR PerVeh (txt) <a href="#">Single File</a> <a href="#">Multiple Files</a>	Diamond <a href="#">Single File</a> <a href="#">Multiple Files</a>	HISAR <a href="#">Single File</a>	TMWIN <a href="#">Vehicle Count</a> <a href="#">Azle Count</a> <a href="#">Per Vehicle</a>
ODOT <a href="#">Single File</a> <a href="#">Multiple Files</a>	Datalink <a href="#">Single File</a>	XLS Template <sup>1</sup> <a href="#">Single File</a> <a href="#">Multiple Files</a>	WaveTronix <a href="#">Single File</a>	WaveTronix HD <a href="#">Single File</a>
GDOT Class (csv) <a href="#">Single File</a> <a href="#">Multiple Files</a>	GDOT Class (mdb) <a href="#">Single File</a>	MORPC (xls) <a href="#">Single File</a>	VIAS Vol <a href="#">Single File</a> <a href="#">Multiple Files</a>	VIAS PerVeh <a href="#">Single File</a> <a href="#">Multiple Files</a>
Speed (xls) <a href="#">Single File</a> <a href="#">Multiple Files</a>	Diamond PerVeh <a href="#">Single File</a> <a href="#">Multiple Files</a>	FWWA <a href="#">Single File</a> <a href="#">Multiple Files</a>	VDOT Peek <a href="#">Single File</a> <a href="#">Multiple Files</a>	RTMS <a href="#">Single File</a> <a href="#">Multiple Files</a>
Smartway <a href="#">Single File</a> <a href="#">Multiple Files</a>	Centurion PerVeh <a href="#">Single File</a> <a href="#">Multiple Files</a>	Centurion Volume <a href="#">Single File</a> <a href="#">Multiple Files</a>	Centurion Class <a href="#">Single File</a> <a href="#">Multiple Files</a>	MDOT Short Count (dbf) <a href="#">Single File</a> <a href="#">Multiple Files</a>

<sup>1</sup> For Single Direction examples and templates, download:  
[volume template](#), [bin count template](#), [volume example](#), [bin count example](#)  
 For Multiple Direction examples and templates, download:  
[volume template](#), [bin count template](#), [volume example](#), [bin count example](#)





# Software Benefits

- Instant detailed traffic data access throughout the agency, both historical, current, and continuous data sources
- Improved data distribution and access of traffic data to the public
- Productivity increase for Central Office Staff, field technicians, and our count partners.
- Expandable to allow INDOT to process and store local traffic counts
- Better data QA/QC
- More accountability
- Integrated data from various count devices and sources



# Proposed 2012 Count Program Changes

- 24-hour and volume only counts on low volume rural area roads
- Continue count setting on Mon-Wed
- Vehicle Length Bins
- Use non-intrusive technologies on high volume roads



# Demonstration of Devices

- Autumn Young & Greg Katter
  - Interactive Traffic Data Map
  - Adjustment Factors
  - Hourly Interstate Traffic Data

